

3.1 – Absolutely – 100% YES.

3.2 – At this time – YES.

3.3 – Absolutely – 100% YES.

4.1 – Absolutely 100% YES.

4.2 – Yes

4.3 – Our experience is broadly in line with Ofcom assessment of circa 1:20, albeit at a lower ratio in more rural environments. We also believe that as fibre networks become more common, those companies that can ‘just’ justify a leased line will actually move to contended lines as speeds finally get ahead of the demand curve as opposed to lagging the demand curve of recent past. As such, overall leased line revenues are likely to fall as a result of large scale fibre deployments rather than just companies being able to use PIA to ‘cherry pick’ leased line revenues. There is obviously some evidence to the contrary of this point of CP’s who target just businesses. However, we target largely residential markets (as per Ofcom aspiration), and ‘pull through’ of leased line revenues (and indeed differential business pricing for contended/asynchronous services) is an advantage to our business model which would dilute the business case if removed.

Question 4.4: Do you agree with our assessment on the potential options to relax usage restrictions, their benefits, risks and challenges? YES Is there any additional option we should consider? NO VIEW What do you consider to be the best option? MIXED

Question 4.5: In your opinion, how can we design and enforce a mixed usage rule? NO VIEW What characteristics should it have and how can it be enforced? NO VIEW Do you think a mixed rule would materially constrain telecoms providers’ network designs and business plans? FOR THE LIKES OF LEVEL3 SAY – YES (PROBABLY QUITE RIGHTLY BASED ON THE OBJECTIVE/S)

Question 4.6: In your opinion, how can we design and enforce an any usage rule? NO VIEW What characteristics should it have and how can it be enforced? WITH DIFFICULTY AND WITH COSTS TO ALL INVOLVED! Do you think an any usage rule, limited to the local area, would materially constrain telecoms providers’ Network Designs and Business plans NO – AND SUCH AN APPROACH WOULD BE OUR PREFERRED APPROACH/OPTION.

5.1 – Please note that CP enabling works is described as ‘just’ clearing blocked ducts. It is important that CP can also do other enabling works (as agreed already by OR in recent pilot) such as installing rings on top of poles without recourse to BT. Other enabling works have also been agreed (OR can confirm) that are important for CP to be able to complete jobs in a timely and efficient manner.

With regards Q5.1 – YES.

5.2 – YES Noting that for small scale jobs, it would be unlikely that there would be a physical survey pre-build i.e. a desktop survey/plan would be sufficient and an efficient method in most cases to then issue a job pack for the build stage.

5.3 – YES

5.4 – Current (non pilot) process also has other enabling works that can only be carried out by OR e.g. installation of rings on poles for drop fibres to attach to. These suffer the same delays. It should also be noted that a CP undertaking build works can often proactively serve highways notice for the planned works that could ALSO cover enabling works e.g. dig downs to clear blocked ducts. Requiring OR to do enabling works means that the opportunity of using the same highways notice is lost and this also inconveniences the public more as well as being overall inefficient.

5.5 – YES.

5.6 – Limited to providing clear capacity along existing routes and not new routes. Note that this should ALSO include replacing D poles and rarely upgrading poles so as to have capacity to accommodate in-line (backhaul) fibre (as DP is a different scenario as discussed elsewhere in the paper). Note on pole upgrades/replacement – this COULD well be identified at pre-build stage (ref 5.28).

Q5.7, 5.8 and 5.9 – Our experience of OR doing enabling works (and would assume therefore no different to build works) is poor. As such, self-provision would be an important facilitator and should be included as an option. We believe that evidence of similar OR works for fibre (Ethernet) services demonstrate OR issues with co-ordinating civil works to the detriment of all stakeholders. Indeed, using Ethernet services as an example, we believe that for self-provision SLG rather is absolutely essential to motivate OR appropriately – with VERY clear and simple metrics around how such SLG apply. We do not think that self-provision should necessarily be the only remedy, as we know other operators are less willing to co-ordinate civil works themselves.

5.10 – YES.

5.11 – NOTE this should extend to works required for pole improvement/renewal AND chamber improvement such as lids being buried under re-surfaced roads etc.

Approval for CP co-ordinated works SLA - 3 working days SLG – 5 working days. NOTE

OR completion of works SLA – 3 weeks, SLG 6 weeks.

5.12 – YES and consideration should be given to other types of facility in chambers that OR can also deploy, for example UG DSLAM (viz G.Fast) which sits between PIA and SLU products. We anticipate that in addition to optical splitters as a one to many joint, FTTP may in the future have active UG GPoN units similar to G.fast (FTTRN or similar) that would suit housing in OR chambers to avoid street furniture proliferation.

5.13 – In the first instance, connections should be allowed up to the pole capacity to allow for swift installations that support short customer provisioning lead times. It is worth noting that Openreach have recently confirmed via the PIA forum that only circa 4% - 6% (from memory) of poles in the OR network are believed to be at capacity. Beyond this, we would agree that replacing dropwires as suggested would be the simplest low cost option – and this should be an option whether the pole is at capacity or not i.e. to allow for less ‘overhead wire clutter’ i.e. when available this should be optional (depending on pole capacity).

We would recommend that a hybrid dropwire should provision the optical pathway as an empty tube of industry standard 5/3.5mm size. This will allow a CP to push/blow pre-made fibres through the final drop i.e. using fibre and pre-made ends that suit their own network design (but see elsewhere potential wayleave issue). In the event of the customer changing CP provider, the gaining provider would be able to either take over the previous CP fibre connection or simply pull it out and replace it with their own push/blown fibre.

5.14 Yes. However it should also be noted that at both distribution and carrier poles, a number are registered as ‘D’ poles. Where such a ‘D’ pole assignment means that no new wires can be attached (even if working via a ‘cherry picker’), a process is required that expedites the replacement of the pole rather than waiting for OR to replace within their pole renewal programme. This should effectively be at nil, or near nil, cost to the CP as the pole has already been identified as needing replacement.

5.15 See 5.14. Also for UG networks it has been stated by OR at the PIA forum that any duct that crosses private land will require the CP to gain a wayleave with the landowner as the OR wayleave does not give such rights to a third party to install their cables in OR ducts (albeit no written evidence has ever been supplied despite repeated requests to this end i.e. OR will not provide a copy of their standard wayleave proving the use to be specific to them). It needs to be ascertained if this same wayleave position applies to poles installed on private land, as a similar situation would have a detrimental impact. It would be useful if rights of flight over private land was clarified in this paper i.e. under what circumstances a CP dropwire can pass over private land for the benefit of someone other than the landowner and indeed where the pole sits on private land.

5.16 – Yes provided the option of new dropwires remains where the pole is not at capacity i.e. so that a CP is not reliant (where it is not necessary) on OR to deliver on this new process.

5.17 – SLA/SLG for OR to implement. Type of fibre/tubing standard used. Wayleave issues where tubing crosses private land/poles similar to issues of duct crossing private land where CP still needs to gain a wayleave (if this were true – a fixed fibre option rather than tubing could be a remedy as it would belong to OR and rented– but adds complexity).

5.18 – It should be an option for the CP to use at their discretion where a pole is not capacity constrained. This to give CP an option to expedite provisions (own provides/fibre) and also as an OPTION if aesthetic considerations are necessary in a locality (wire clutter).

5.19 – Generally yes. However, where direct buried/full lead-in duct exists, we would forecast that CPs will adopt the remedy of poles rather than digging new lead-ins as this is generally more cost effective and enables more timely provision for subsequent orders. Where no poles exist, this is a reasonable remedy when compared to other areas where pole distribution is the norm, albeit may

lead to local objections. There is the alternative of adopting the 'Gigaclear model' of a CP installing a 'handover POT' i.e. making the lead in the responsibility of the customer.

6.1 – Yes

6.2 – Yes

6.3 – Charge control – acceptable. Alternatives – no.

6.4 – No view

6.5 – Possibly not the correct place to comment – but it is a general view of the PIA forum that PIA charges for duct use should align to the size of the cable. A standard charge based on 25mm OD sub duct encourages a CP to use (waste?) valuable duct space i.e. where they do not require that space but perceive using the full 25mm would make it more difficult for a competing CP to use the remaining duct space. As an example of our proposed standard cable at 7mm OD, it would take SEVEN such cables to occupy the same area as a 25mm sub-duct – yet currently are required to pay the same rental as a 25mm sub duct.

Additionally it does not make sense how a dropwire (on pole) can be charged based on if it is to feed a single or multiple customers. Under a passive remedy, it should relate to the space/loading/similar occupied and not the use case.

Finally, we believe the charges for duct 'lead ins' needs reviewing as they seem disproportionately high.

6.6 – Yes

6.7 – Yes. While we do not have a view on the most appropriate method, we do not view that the current proposed PIA methodology works at all well for volume connections after a core/DP network has been built (using the existing/proposed PIA method). Serving whereabouts and sending pictures and DSR's of final connections/lead-ins would be completely onerous. Additionally, if a minimum charge per PIA order were maintained, this would add further significant costs to the volume connections process. We propose that a volume method of customer connections is developed/implemented where a CP can provide a weekly/monthly return of all the connections that have been completed from installed DP's along with rental implications i.e. without whereabouts or pictures being provided. This to be done on an equivalent basis with OR for their fibre provisioning as proposed.

6.8 – Initial views – Yes. Bounded – yes with an upper time limit of 12 months.

6.9 – Largely but with following caveats:

a. As mentioned elsewhere – pole replacements need to be considered where either the DP is classified as D and unclimbable, or any in-line pole (for backhaul network) is equally classified D or needs upgrading to accommodate a CP fibre dropwire (which is used for both backhaul and distribution). We believe that such pole replacements should be at OR cost and subject to a SLA/SLG regime for time to replace/upgrade.

b. There is not an exhaustive list of enabling works that a CP can do apart from clearing blockages. As part of the recently concluded PIA 'improvement trial', other enabling works have been agreed that a CP can undertake with suitably qualified staff e.g. provision a ring on a pole. If there is any risk of OR changing this position then they would need explicit inclusion in this paper.

c. Tree cutting. In rural areas in particular, to be able to deploy new overhead fibre can require extensive and expensive tree cutting. Such work is to the benefit of OR as it stops trees rubbing on existing cables as a fault liability. Electricity companies undertake a pro-active tree cutting process to reduce risk of tree related issues. While it is unclear if OR do any such pro-active work (believed not), such enabling works are clearly to the benefit of OR and is akin to clearing of duct (indeed as it reduces an impending fault liability – even more beneficial to clearing ducts). As such, tree cutting should be treated in the same way as proposed for clearing of ducts i.e. at OR cost. Evidence can be provided as to the cost of tree cutting on a recent project. If not addressed, it will leave significant rural areas without new fibre networks due to the costs involved where significant tree growth is blocking new cable provision.

6.10 – Pole renewals/upgrades.

6.11 – As mentioned elsewhere rental should relate to the space consumed for duct networks. As such, for duct space there should be a banding charge for space used by cable or sub duct e.g.  $\leq 8\text{mm}$ ,  $> 8\text{mm}$  and  $\leq 16\text{mm}$ ,  $> 16\text{mm}$  and  $\leq 25\text{mm}$  (current max size). It should be noted that  $< 8\text{mm}$  occupies  $< 1/7^{\text{th}}$  of the space of a 25mm sub duct and one would reasonably therefore assume an order of magnitude reduction in rental prices. Pole connections should equally relate to the loading on the pole and not the use case e.g. if cable used for single/multiple connections. There should be a higher charge for aerial type cables that increase the loading on the pole (i.e. use more 'capacity' of the pole) and a much lower charge for cables that classify as drop cables (which is related to both breaking strain and max OD of currently 7mm). Such banding will encourage CPs to use minimum capacity of the OR network and hence make it more likely that sufficient space will remain (without augmentation) for competing CP and indeed OR themselves to deploy their own competing fibre networks.